

## **Abstract**

A high speed, low cost, wide spectrum light scanning and sensor unit (10) for receiving reflected light from an object and diffracting the light into segments of wavelengths and a linear sensor array (32) having elements positioned to receive the segments and to measure the relative magnitude of such segments to define a spectral distribution of the object together with a digital identifier-controller (36) connected to said sensing device and having a memory for memorizing a spectral distribution of light representing a first standard object, and additional memory for receiving a spectral distributions of other objects and programmable logic circuitry containing a program for determining the similarity between the standard object and the other objects.